

31. (New) The method of claim 29, wherein said substance is an antibody that binds to the extracellular domain of Alk-1.

32. (New) The method of claim 29 wherein said cells that express Alk-1 are transfected with a nucleic acid molecule which encodes Alk-1.

33. (New) The method of claim 29 wherein said Alk-1 is a constitutively active Alk-1.

34. (New) The method of claim 29, wherein said Alk-1 is a kinase inactive Alk-1.

35. (New) The method of claim 32, wherein said Alk-1 is an Alk-1 fusion polypeptide.

36. (New) The method of claim 35, wherein said Alk-1 is fused to hemagglutinin.

37. (New) The method of claim 29, wherein said cells that express Alk-1 are transfected with a nucleic acid molecule which encodes a Smad1 or a nucleic acid molecule which encodes a Smad5.

38. (New) The method of claim 37, wherein said Smad1 is a Smad1 fusion polypeptide.

39. (New) The method of claim 38, wherein said Smad1 is fused to Flag.

40. (New) The method of claim 37, wherein said Smad5 is a Smad5 fusion polypeptide.

41. (New) The method of claim 40, wherein said Smad5 is fused to Flag.

42. (New) The method of claim 29, wherein inhibition of Smad1 or Smad5 phosphorylation in said cells that express an Alk-1 indicates inhibition of binding of TGF- β to Alk-1.

43. (New) A method for determining if a substance inhibits TGF β /Alk1 induced Smad1 or Smad5 phosphorylation comprising contacting a first sample of cells that express an Alk1 and Smad1 or Smad5 with said substance in the presence of TGF β and determining if Smad1 or Smad5 phosphorylation is inhibited, wherein a reduced level of

phosphorylation in said first sample of cells contacted with said substance in the presence of TGF- β as compared to a control sample of cells is indicative of said substance inhibiting TGF- β /Alk-1 phosphorylation of Smad1 or Smad5.

24. (New) The method of claim 43, wherein said substance is an antibody that binds to TGF- β .

3 25. (New) The method of claim 43, wherein said substance is an antibody that binds to the extracellular domain of Alk-1.

4 26. (New) The method of claim 43, wherein said first sample of cells that express Alk-1 are transfected with a nucleic acid molecule that encodes an Alk-1.

RwB2 27. (New) The method of claim 43, wherein said first sample of cells that express Alk-1 are transfected with a nucleic acid molecule which encodes a Smad1 or a nucleic acid molecule which encodes a Smad5.

6 28. (New) The method of claim 47, wherein said Smad1 is a Smad1 fusion polypeptide.

7 29. (New) The method of claim 48, wherein said Smad1 is fused to Flag.

30. (New) The method of claim 47, wherein said Smad5 is a Smad5 fusion polypeptide.

51. (New) The method of claim 50, wherein said Smad5 is fused to Flag.

52. (New) The method of claim 43 wherein said Alk-1 is a constitutive Alk-1.

53. (New) A method for determining if a substance inhibits Alk1 induced Smad1 or Smad5 phosphorylation comprising contacting a first sample of cells that express a constitutive Alk1 and expresses Smad1 or Smad5 with said substance and determining if Smad1 or Smad5 phosphorylation is inhibited, wherein a reduced level of Smad-1 or Smad-5 phosphorylation in said first sample of cells contacted with said substance as compared to